



Letter to the editor

## Coronal resorption of an impacted maxillary canine: A remarkable finding on routine radiographic examination



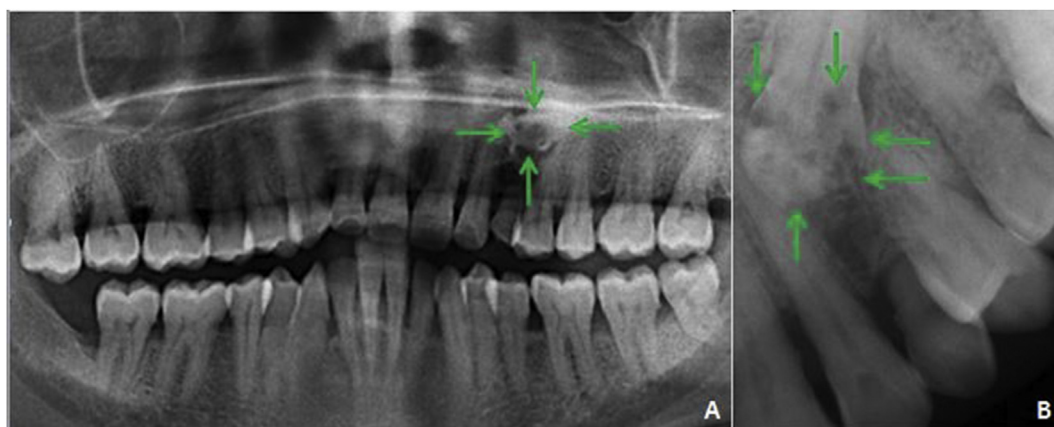
Dear Sir

This letter is in reference to an article that I read in the recent issue of your esteemed journal by Le et al.<sup>1</sup> entitled “Treatment of pre-eruptive intracoronal resorption: A systematic review and case report,” commentary published in the Journal of Dental Science (2020) with great interest. We found a similar entity in our private practice in a 37-year-old male patient who visited our clinic with a chief complaint of a small tooth on the left upper anterior region. His medical and familial histories were unremarkable; he attended an individual practitioner to clean his teeth twice prior to this appointment. On clinical examination, he presented with permanent dentition, and left maxillary primary canine was retained. On radiographic examination, there was evidence of an impacted left maxillary canine with coronal resorption on the panoramic radiograph (Fig. 1A) and on the periapical radiograph (Fig. 1B). The maxillary canine is commonly found to be impacted after third molars in any given population.<sup>2</sup> The widely seen complications with impacted canines are midline diastemas, the ectopic eruption of adjacent permanent teeth, resorption of adjacent teeth, and cyst formation.<sup>2,3</sup> Based on existing literature, impacted canines induce resorption of the roots or crowns of the adjacent teeth,<sup>3</sup> nonetheless resorption of the impacted canine itself has never been reported in the existing literature. Intra-coronal resorption is a condition associated with either physiologic or pathologic processes that cause the loss of dental tissue.<sup>4</sup> It sometimes occurs with intra-pulpal infection, orthodontic tooth movement, adjacent-tooth impaction, tooth injury, or the presence of a tumor. Resorption of unerupted teeth is often a result of regional pathologic processes or ectopic eruption from adjacent teeth.<sup>3</sup> Certain types of resorption of permanent unerupted tooth crowns

have been described in case reports and also demonstrated in the literature.<sup>1,4</sup> Manan and co-workers<sup>5</sup> reported a case of intra-coronal resorption of maxillary canine; however, the canine has erupted at a mixed dentition phase. The authors suggested the early diagnosis of this condition and to formulate short and long-term treatment plans, which included keeping the affected tooth to retain the alveolar bone height and width. Most recently, Manmontri et al.<sup>2</sup> opined that these cases would refer to endodontist for the management prior to orthodontic treatment if the affected tooth needs to be involved in treatment planning. In the present case, the impacted canine exhibited coronal resorption and the treatment options discussed with the patient included (i) monitor eruption of the tooth (ii) no treatment since there was no pain, (iii) surgical removal of the impacted canine, (iv) surgical exposure and traction for orthodontic treatment, and (v) auto-transplantation of the tooth. After discussing the risks and benefits with the patient, only surgical removal of the affected canine was suggested and the remaining four options were not practically possible. However, the patient declined for treatment. Hence, the patient kept under observation to monitor whether the tooth had further progress of coronal resorption. Root or coronal resorption of adjacent teeth caused by impacted canine has been reported very commonly by various researchers.<sup>5</sup> However, our presentation may be the first report of coronal resorption of a maxillary impacted canine. Resorption of adjacent teeth (central incisors or lateral incisors) is commonly seen caused by impacted canine. However, coronal resorption of maxillary impacted canine has not been cited in the literature. We suggest that the longstanding impaction of canines may be the causes that result in coronal resorption of the impacted canine.

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**Figure 1** Radiographic features of our case. (A) Panoramic radiography showing the coronal resorption of the left maxillary permanent canine. (B) Periapical radiography demonstrating the coronal resorption of the left maxillary permanent canine.

### Declaration of Competing Interest

The author has no conflicts of interest relevant to this article.

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